REMARKS/ARGUMENTS

Claims 19, 21-23, 30, 32, 35, 46-48 and 50-66 are pending in this application.

Interview and Indication of Allowable Subject Matter

Applicant appreciates the consideration given during a telephone interview including Applicant, the Examiner, and the undersigned attorney on June 3, 2004, and in a follow-up discussion between the Examiner and the undersigned attorney on June 7, 2004. Applicant appreciates that the Examiner has determined that each of ***Claims 21-23 and 59-66***, as presented to the Examiner in a draft amendment prior to the interview are now allowable. Claims 21-23 and 59-66, as presented above, are identical to those that were presented to the Examiner prior to the interview in a draft amendment. Therefore, each is now allowable in addition to ***Claims 19 and 32*** which were previously determined to be allowable.

Rated Fuse Feature

Claims 30, 35, 46-48 and 50-58 are drawn to a second feature of Applicant's invention, wherein each recites a medical electrode comprising a fuse coupled to the proximal end of the electrode.

Claim 30, as now amended, recites a fuse connected immediately adjacent to the proximal end of the pad electrode and having a current rating not less than approximately 1.57 milliAmps. It is known by those skilled in the art that pad electrodes (for cardiac monitoring, e.g.) have skin surface contact regions with diameters between 1 cm and 3 cm. The surface area of the smallest diameter pad electrode (or plate electrode) is then $\pi \bullet r^2 = 3.14159 \bullet (.5\ cm)^2 = 0.785\ cm^2$. As it is desired to have enough current to perform the desired procedure, the applied current is desired to be between just above a sufficient current and a current that produces approximately the current density safety standard of 2 milliAmps rms/cm^2. As it is desired to have a current somewhere within this window, the current rating of the fuse is desired to be at the upper end of this range at or near the current density safety standard. Thus, the fuse should have a rating of not less than approximately 2 x 0.785 = 1.57 milliAmps. As the Examiner is already aware, the Day patent teaches a maximum current in the range of 100 microAmps at column 1, line 20. Therefore, the Day patent does not teach this current rating feature of Applicant's claim 30. Moreover, Day does not suggest to use a fuse having the recited current rating, and in fact, suggests not to use a fuse at all. As has been discussed, the Day and Ogle patents each suggest to use current limiter circuits, and not fuses. Therefore, claim 30, as now amended, is allowable.

Claim 35 is allowable as being dependent from claim 30. Claims 50 and 53 are allowable for the same reasons as claim 30.

Claim 46 recites a medical needle electrode including a fuse coupled immediately adjacent to the proximal end of the needle electrode and having a current rating not less than approximately 0.5 milliAmps. It is known by those skilled in the art that a current generally sufficient to stimulate a nerve is not less than approximately 0.5 milliAmps. Thus, the fuse should have a rating of not less than approximately 0.5 milliAmps. The Day patent does not teach or suggest this feature, and instead teaches only a maximum current of 100 microAmps for a current limiter circuit, and suggests not to use a fuse at all. Therefore, claim 46, as now amended, is allowable. Claims 47-48 are each allowable as being dependent from claim 46. Claim 51 is allowable for the same reasons as claim 46. Claim 55 is allowable for substantially the same reasons as claim 46, except that claim 55 recites a corkscrew-shaped portion for connecting to the patient, because the same current constraints apply.

Claim 52 recites a medical electrode including a proximal end including a portion formed in the shape of a strap for connecting to a patient, and a fuse coupled immediately adjacent to the proximal end of the electrode and having a current rating not less than 2 milliAmps. It is understood that a strap electrode will include a contact surface region not less than approximately 1.0 cm^2, and thus a current rating for the fuse is desired to be not less than approximately 1.0

cm^2 x 2.0 milliAmps rms/cm^2 = 2.0 milliAmps. This feature is not taught or suggested by any of the prior art being relied upon by the Examiner, and thus claim 52 is now allowable. Claims 54 and 56 are allowable for the same reasons as claim 52, except that they are drawn to ear plug and clip electrodes, respectively.

Finally, claim 57, as now amended, recites a medical side-snap electrode including a current stoppage means selected from the group consisting of a fuse or a circuit breaker, the current stoppage means coupled to the proximal end of the side-snap electrode aft of the conductive lead. As understood, none of the prior are being relied upon by the Examiner teaches or suggests this feature, and thus claim 57 is now allowable.

Claim 58 is allowable as being dependent from any of claims 50-57.

In view of the above, it is respectfully submitted that the application is now in condition for allowance. The Examiner's early reconsideration and indication to that effect is respectfully requested.

The Commissioner is authorized to charge any deficiencies in fees and credit any overpayment of fees to Deposit Account No. 07-1896. A duplicate page is enclosed.

Respectfully submitted,

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Dated: 6-25-04 By _____

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